

CERTIFICATION OF ENDORSEMENT

Singapore Green Labelling Scheme

Certification Number: 032 – 099

Expiration Date: 27 / 06 / 2011

Description Text: “Environmentally Friendly/Low VOC Paint/Coating. Heat Reflective Paint/Coating”

Company Name: Heat-AX Pte. Ltd.

Tel: (+65) 6291 2303

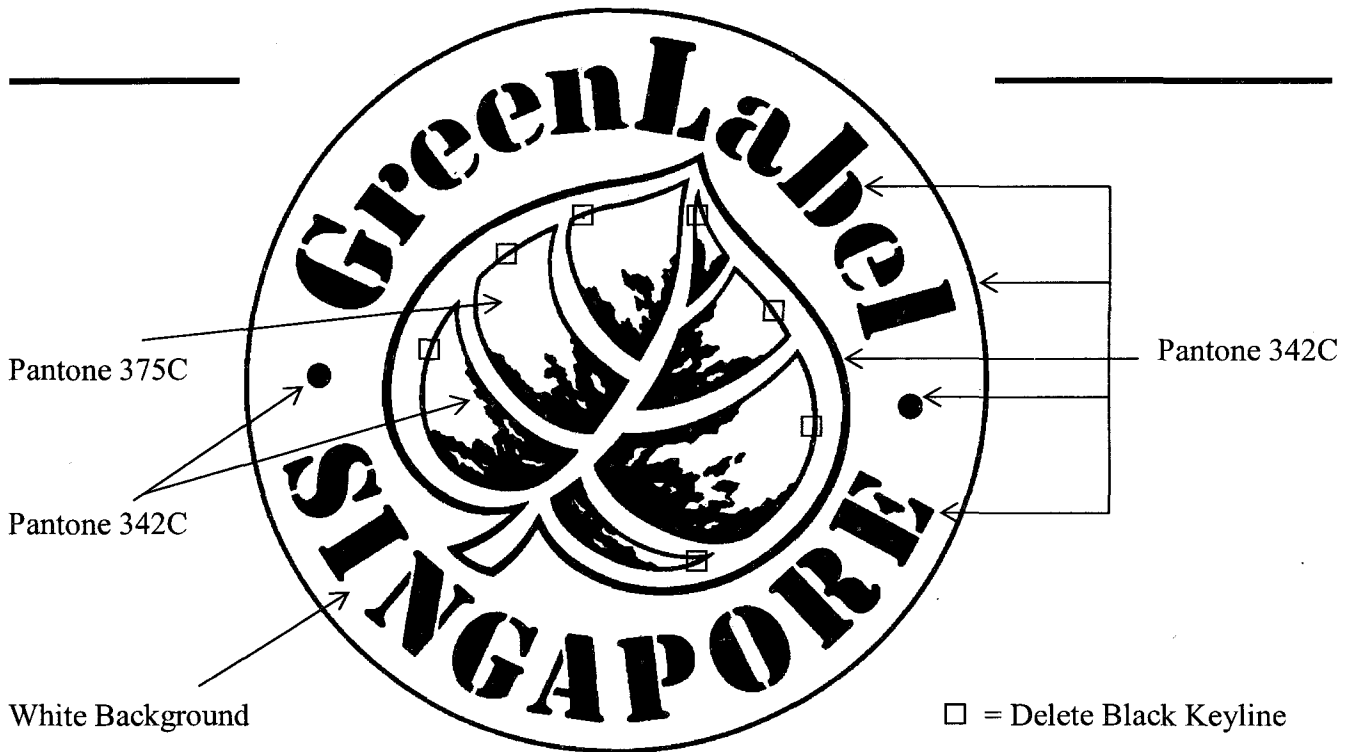
Fax: (+65) 6293 6265

Address: 9 Kelantan Lane #02-01, Singapore (208628)

ANNEX A – Endorsed Product List

Brand / Trade Name	Model	Description / Specification
HEAT-AX	HeatAX 8000	INSULATION COATING (HEAT REFLECTIVE)

ANNEX B – GreenLabel Logo Design Requirements





SETSCO SERVICES PTE LTD

18 Teban Gardens Crescent
Singapore 608925
Tel : (65) 6566 7777
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Website: www.setsco.com
Business Reg. No. 196900269D

Our Ref : CH-25418/LZP

Date : 02 June 2010

TEST REPORT

Page 1 of 6

(This Report is issued subject to the terms & conditions set out below)

Tested For : **Heat-AX Pte Ltd**
9 Kelantan Lane #02-01
Singapore 208628
Tel: 6291 2303

Date Sample Received : **26 May 2010**

Date Commenced : **27 May 2010**

Date Completed : **02 June 2010**

Sample Description

Samples was received on 27 May 2010 with reference:

Part Description : Brand/Trade Name : HeatAX
Description : Insulation Coating

Test Requested

To determine the content of the following metals and organic compounds in the sample submitted in compliance to RoHS Directive EU 2002/95/EC:

Metals:

1. Cadmium (Cd)
2. Lead (Pb)
3. Mercury (Hg)
4. Hexavalent Chromium (Cr(VI))

Organic Compounds:

5. Polybrominated biphenyls (PBBs)
6. Polybrominated diphenyl ethers (PBDEs)

AUTHORIZED BY:

LEI ZHI PEI
MANAGER
BIOLOGICAL & CHEMICAL TECHNOLOGY DIVISION
SETSCO SERVICES PTE LTD

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Our Ref : CH-25418/LZP
 Date : 02 June 2010
 Supplier : Heat-AX Pte Ltd

Test Results :

Item No.	Element / Compound Name	Result (ppm / mg/kg)	RoHS Directive 2002/95/EC (ppm / mg/kg)
1	Cadmium (Cd), ppm wt	Not Detected	100
2	Lead (Pb), ppm wt	Not Detected	1000
3	Mercury (Hg), ppm wt	Not Detected	1000
4	Hexavalent Chromium (Cr ⁶⁺), ppm wt	Not Detected	1000
5	<u>PBBs (Polybrominated Biphenyl) (C₁₂H_{10-x}Br_x)</u> Monobromobiphenyl Dibromobiphenyl Tribromobiphenyl Tetrabromobiphenyl Pentabromobiphenyl Hexabromobiphenyl Heptabromobiphenyl Octobromobiphenyl Nonabromobiphenyl Decabromobiphenyl	Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected	
	Total PBBs (Polybrominated Biphenyl) / Sum of above	Not Detected	1000
6	<u>PBDEs (Polybrominated Diphenyl Ether) (C₁₂H_{10-x}Br_xO)</u> Monobromodiphenyl Ether Dibromodiphenyl Ether Tribromodiphenyl Ether Tetrabromodiphenyl Ether Pentabromodiphenyl Ether Hexabromodiphenyl Ether Heptabromodiphenyl Ether Octobromodiphenyl Ether Nonabromodiphenyl Ether Decabromodiphenyl Ether	Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected	
	Total PBDEs (Polybrominated Diphenyl Ether) / Sum of above	Not Detected	1000

Notes : 1) ppm wt : mg/kg

- 2) Detection Limit : a) Cadmium : 2.0 ppm
 b) Lead : 10.0 ppm
 c) Mercury : 2.0 ppm
 d) Hexavalent Chromium : 2.0 ppm
 e) Polybrominated Biphenyls : 5.0 ppm
 f) Polybrominated Diphenyl Ethers : 5.0 ppm

- 3) Above tests were carried out by Setsco's chemists : Ee Suat Sian or Yong Soh Wah.
 4) Photo of sample is attached in Appendix.

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Our Ref : CH-25418/LZP
Date : 02 June 2010
Supplier : Heat-AX Pte Ltd

Test Methods :

Preconditioning Method :

IEC 62321 Ed. 1 : Electrotechnical Products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

Measurement Method :

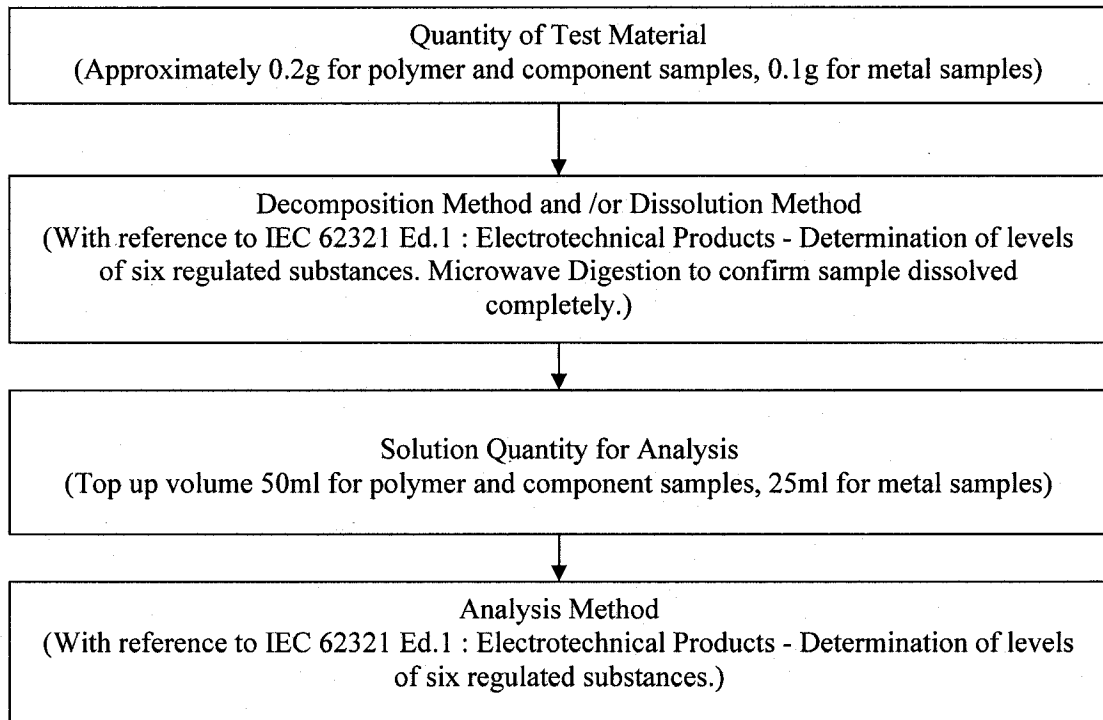
IEC 62321 Ed. 1 : Electrotechnical Products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

Our Ref : CH-25418/LZP
 Date : 02 June 2010
 Supplier : Heat-AX Pte Ltd

RoHS Substances Analysis Flowchart - Acid Digestion

Elements : Cadmium (Cd), Total Chromium (Cr), Lead (Pb), Mercury (Hg)

Pretreatment:



Instrument Used:

1. ICP-OES: Perkin Elmer ICP Optima 5300DV
2. Microwave: Milestone Ethos Touch Control
3. AAS-FIAS: Perkin Elmer AAnalyst 800 and FIAS 100

Standard Used:

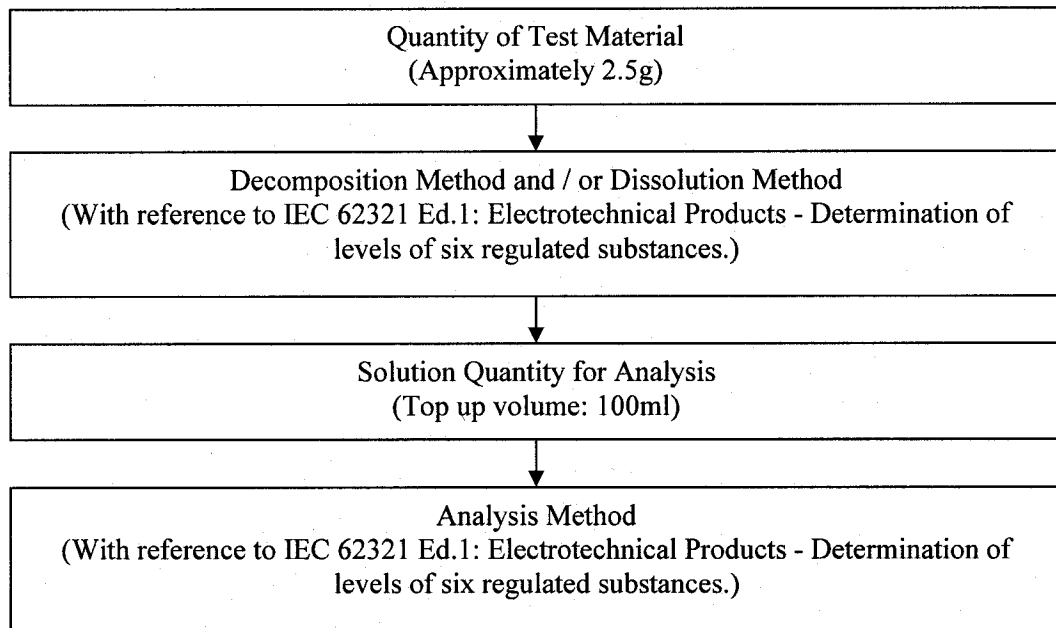
Merck: Cadmium, Chromium, Lead and Mercury standard solution.

Our Ref : CH-25418/LZP
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RoHS Substances Analysis Flowchart - Alkaline Digestion

Element : Hexavalent Chromium (Cr^{6+})

Pretreatment:



Instrument Used:

UV/Vis Spectrometer: Shimadzu UV-Vis Spectrometer, UV-1601/A1075.

Standard Used:

HACH-Chromium Reference Standard Solution.

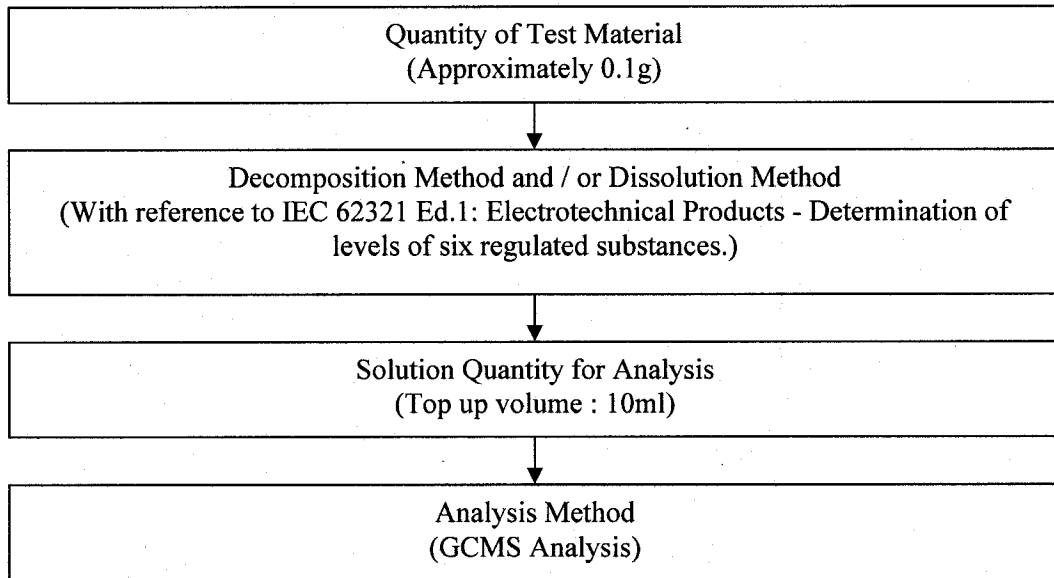
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Our Ref : CH-25418/LZP
 Date : 02 June 2010
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RoHS Substances Analysis Flowchart - Solvent Extraction

Elements : Polybrominated Biphenyls (PBB) and Polybrominated Diphenyls ether (PBDE)

Pretreatment:



Instrument Used:

GCMS : ThermoFinnigan PolarisQ Trace GC Ultra AS3000

Standard Used:

1. AccuStandard:
 - a. PBBs: Bromobiphenyl, Dibromobiphenyl, Tribromobiphenyl, Tetrabromobiphenyl, Pentabromobiphenyl, Hexabromobiphenyl, Heptabromobiphenyl*, Octabromobiphenyl*, Nonabromobiphenyl*, Decabromobiphenyl.
 - b. PBDEs: Bromodiphenyl ether, Dibromodiphenyl ether, Tribromodiphenyl ether, Tetrabromodiphenyl ether, Pentabromodiphenyl ether, Hexabromodiphenyl ether, Heptabromodiphenyl ether, Octabromodiphenyl ether, Nona bromodiphenyl ether, Decabromodiphenyl ether.

Note : *denotes standards from Wellington Lab.

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**TEST REPORT**

(This Report is issued subject to the terms & conditions set out below)

Subject : Green Label test under SGLS Category 032 on sample submitted by Heat-AX Pte Ltd on 26/05/2010 and test commenced on 27/05/2010.

Tested For : **Heat-AX Pte Ltd**
9 Kelantan Lane #02-01
Singapore 208628

Sample Description : Brand/Trade Name : HeatAX
Description : Insulation Coating

Results :

Item No.	Parameter	Test Method	Unit	Result	MDL	SGLS-032 Criteria	Justification
1	Heavy Metals • Cadmium (Cd)	EPA 3052 : Microwave acid digestion EPA 6010B: ICP	ppm	N.D.	2	N.D.	Pass
2	• Lead (Pb)		ppm	N.D.	10	N.D.	Pass
3	• Total Chromium (Cr)		ppm	N.D.	10	N.D.	Pass
4	• Mercury (Hg)		ppm	N.D.	2	N.D.	Pass
5	Volatile Organic Compounds	ISO 11890-2	g/L	7.34	0.1	Interior - 25 Exterior - 50	Pass
6	Total Halogenated Solvent		g/L	N.D.	0.1	N.D.	Pass
7	Total Aromatic Organic Solvent		g/L	N.D.	0.1	N.D.	Pass
8	Epichlorohydrin		g/L	N.D.	0.1	N.D.	Pass
9	N-Methyl Pyrrolidinone		g/L	N.D.	0.1	N.D.	Pass
10	Formaldehyde	High Performance Liquid Chromatography	mg/L	N.D.	0.03	N.D.	Pass
11	Flash Point	ASTM D3828-07a	°C	>61.0	-	>61.0	Pass

Notes : N.D. - Not Detected

MDL - Method Detection Limit

Tests for Formaldehyde and Flash Point were performed in conjunction with Marchwood Scientific Services Ltd and Inspectorate (S) Pte Ltd respectively.


LEI ZHI PEI
MANAGER

BIOLOGICAL & CHEMICAL TECHNOLOGY DIVISION

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